

Attorney Docket # 3397-94PDV4



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Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Vilho NISSINEN et al.

Serial No.: 10/687,194

Filed: October 16, 2003

For: Use of recycled calcium carbonate in the
treatment of a paper, board or nonwoven product

Examiner: HALPERN, Mark
Group Art: 1731

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November 21, 2008

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APPEAL BRIEF

SIR:

This is an appeal, pursuant to 37 C.F.R. § 41.37 from the decision of the Examiner in the above-identified application, as set forth in the Office Action dated May 19, 2008, wherein the Examiner rejected Appellants' claim. The rejected claim is reproduced in the Appendix A attached hereto. A Notice of Appeal was filed on September 18, 2008.

The fee of \$510.00 for filing an Appeal Brief (Large Entity) pursuant to 37 C.F.R. § 41.20 was previously submitted. Any additional fees or charges in connection with this application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

This brief contains items under the following headings as required by 37 C.F.R.

§ 41.37 and M.P.E.P. § 1205.2:

I.	Real Party In Interest
II	Related Appeals and Interferences
III.	Status of Claims
IV.	Status of Amendments
V.	Summary of Claimed Subject Matter
VI.	Grounds of Rejection to be Reviewed on Appeal
VII.	Argument
Appendix A	Claims
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I. REAL PARTY IN INTEREST

The assignee, Metso Paper Oy, is the real party of interest in the above-identified U.S. Patent Application.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals and/or interferences related to the above-identified application at the present time.

III. STATUS OF CLAIMS

Claims 1-61 are cancelled. Claim 62 has been rejected. Claims 63-64 are currently withdrawn as being drawn to a non-elected invention. Claim 62 is on appeal.

IV. STATUS OF AMENDMENTS

A response to the Final Office Action, which contained no Amendments, was filed on July 18, 2007. The Examiner issued an Advisory Action on July 23, 2007 maintaining the rejections in the Final Office Action. A Pre-Appeal Brief Request for Review was filed with the Notice of Appeal on September 21, 2007. A Notice of Panel Decision issued on October 10, 2007 indicating that the application remains under appeal because there is at least one actual issue for appeal. An Appeal Brief was filed on January 23, 2008. In response to the Appeal Brief, prosecution was reopened and an Office Action was mailed on May 19, 2008. The present appeal is in response that Office Action.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Appellants' invention is directed to a use of recycled calcium carbonate in the treatment of a paper, board or nonwoven product (see page 6, line 35 to page 7, line 5 of the present application as originally filed).

According to the present invention, a paper, board, or nonwoven product is treated with the recycled calcium carbonate (see page 5, lines 25-27 and page 6, line 35 to page 7, line 5 of the present application as originally filed). As stated in original claim 59, and as described in the second paragraph on page 4 of the preliminary amendment to the specification filed with the application, the recycled calcium carbonate is prepared by calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board or non-woven product, reacting the lime with water to form calcium hydroxide, and reacting the calcium hydroxide with carbon dioxide to form the recycled calcium carbonate.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. The rejection of claim 62 as being indefinite under 35 U.S.C. §112, second paragraph.
2. The rejection of claim 62 as being anticipated under 35 U.S.C. §102 by U.S. Patent No. 5,795,258 (Sohara).
3. The rejection of claim 62 as being anticipated under 35 U.S.C. §102 by WO 98/16471 (Virtanen)?

VII. ARGUMENT

Claims 62-64 are pending in the present application. Claim 62 has been examined and claims 63 and 64 are withdrawn from consideration. Claim 62 is improperly rejected and thus pending in this appeal. Appellants respectfully submit that the rejections are deficient and that claim 62 is in condition for immediate allowance.

A. Claim 62 is definite under 35 USC §112, second paragraph.

Claim 62 stands rejected under 35 U.S.C. §112, second paragraph, as indefinite. More specifically, the Examiner alleges claim 62 “is non-statutory because it includes the USE and the METHOD OF MAKING of recycled calcium carbonate.” Office Action at 3. Appellants submit that claim 62, as drafted, is not indefinite and recites statutory subject matter.

There is no ambiguity inherent in claiming a method that involves the use of specific physical objects. Collaboration Properties Inc. v. Tandberg ASA, 81 U.S.P.Q.2d 1530

(N.D. Cal. 2006). Method claims reciting the use of particular devices are the rule rather than the exception. For example, if an inventor claims a “method of driving a nail using a hammer” and the accused infringer drives nails using a rock, there is no doubt that the accused infringer does not literally infringe the claim. Id. A claim is considered indefinite if it does not reasonably apprise those skilled in the art of its scope. IPXL Holdings, L.L.C. v. Amazon.com, Inc., 430 F.3d 1377, 1383–84; 77 U.S.P.Q.2d 1140, 1145 (Fed. Cir. 2005). In the present case, the claim is definite and recites statutory subject matter.

Claim 62 has two distinct limitations:

- 1) preparing recycled calcium carbonate by calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board or non-woven product; reacting the lime with water to form calcium hydroxide; and reacting the calcium hydroxide with carbon dioxide to form the recycled calcium carbonate; and
- 2) treating the paper, board, or nonwoven product with the recycled calcium carbonate.

In the present case, Appellants recite a method of treating paper, board, or nonwoven product using recycled calcium carbonate. The specific “device” used in Appellants’ claim is the recycled calcium carbonate. Appellants’ specification and claims explicitly teach how one skilled in the art obtains the recycled calcium carbonate used to treat the paper, board, or nonwoven product. In other words, a specific method is defined for first obtaining the recycled calcium carbonate. And then treating the paper, board, or nonwoven product using the recycled calcium carbonate. The scope of the pending claim is easy to determine, treating the

paper, board, or nonwoven product with recycled calcium carbonate, the recycled calcium carbonate obtained using the explicitly recited process. Therefore, Claim 62 is not indefinite.

Furthermore, the claimed use of recycled calcium carbonate for the treatment of paper, board, or nonwoven product requires obtaining the recycled calcium carbonate. The steps for obtaining or preparing the recycled calcium carbonate to be used in the treatment of a paper, board, or nonwoven product are properly recited as a part of the overall claimed process for the use of recycled calcium carbonate.

35 U.S.C. §100(b) defines the term “process” for the U.S. Patent laws and states: “The term ‘process’ means process, art or method, and includes a new use of a known process, machine, manufacture, composition or material, or material”. Thus, a use is merely a subset of the group of statutory classes defined as process claims. Accordingly, within the context of the disclosed invention, claim 62 defines a process of using the recycled calcium carbonate to treat a paper, board, or nonwoven product.

In view of the foregoing, claim 62 directed to a process of using recycled calcium carbonate, which recites how the recycled calcium carbonate is obtained, is neither indefinite nor non-statutory. Accordingly, the Board must order the withdrawal of the rejection of claim 62 under 35 U.S.C. §112.

B. The Rejections of Claim 62 under 35 U.S.C. §102(b) are improper.

Appellants submit that claim 62 is improperly rejected under 35 U.S.C. § 102(b) as being anticipated by either U.S. Patent No. 5,759,258 (“Sohara”) or W/O 98/16471 (“Virtanen”).

To anticipate a claim under 35 U.S.C. § 102, the cited reference must disclose every element of the claim, as arranged in the claim, and in sufficient detail to enable one skilled in the art to make and use the anticipated subject matter. PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349 (Fed. Cir. 1998). A reference that does not expressly disclose all of the elements of a claimed invention cannot anticipate unless all of the undisclosed elements are inherently present in the reference. Continental Can Co. USA v. Monsanto Co., 942 F.2d 1264, 1268 (Fed. Cir. 1991). In the instant case, all of the limitations recited in claim 1 are not disclosed by either Sohara or Virtanen.

1. **Claim 62 is not anticipated under 35 U.S.C. §102 by U.S. Patent No. 5,759,258 (“Sohara”).**

Claim 62 stands improperly rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 5,759,258 (“Sohara”). Among the limitations of claim 62 not present in Sohara is the specific step of “calcining into lime” for preparing the recycled calcium carbonate.

Sohara discloses a process for the recovery and reuse of mineral pigments from the residue produced when wastepaper is deinked and processed into secondary pulp fiber. This process comprises heating the residue in an oxygen-containing atmosphere to a temperature, sufficiently high to completely oxidize all of the hydrocarbon materials in the deink residue to yield heat, carbon dioxide, and water, in addition to an ash formed from the non-combustible mineral pigments present in the wastepaper. In the present invention, the mineral ash from the combustion is mixed with calcium oxide and water to form a slurry of calcium hydroxide and ash. A gas containing carbon dioxide, which may be filtered and cooled flue gas, is bubbled into the mixture, and, as the calcium carbonate precipitates, it completely covers the available surface of the ash particles, which act as a substrate and provide nucleation sites for precipitation and growth to occur. The core of mineral ash

below the PCC surface has little or no effect on the optical and physical properties typically exhibited by a so-called "pure" PCC particles, so that the "composite" PCC, particles produced can be used as a substitute for pure PCC particles in most processes or products where PCC is required with little or no adverse effect on product quality. Col. 2, ln. 65 *et seq.*

The Examiner states that Sohara discloses forming calcium carbonate from the residues of deinking of wastepaper process and using the formed recycled calcium carbonate for treatment of paper. However, Applicant notes that the specific step of “calcining into lime” for preparing the recycled calcium carbonate recited in claim 62 is not disclosed by Sohara. Sohara discloses that a deink residue (DIR) is first heated and then turned to mineral ash (see col. 3, ll. 35-40). The mineral ash is then used by Sohara to form the precipitated calcium carbonate (PCC) (see col. 3, ll. 40-48 and 62-67; and col. 4, ll. 1-9). Cols. 6-7 of Sohara, which are referred to by the Examiner in the rejection, also disclose that the DIR is incinerated to produce mineral ash, which is subsequently used for forming PCC (see e.g., col. 6, ll. 37-42; and col. 7, ll. 58-67).

At no time does Sohara disclose the specific step of “calcining into lime.” Because Sohara discloses heating deink residue to form mineral ash, Sohara fails to disclose, teach, or suggest “calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board, or nonwoven product”, as recited in independent claim 62. Thus, Sohara does not disclose all of the limitations of claim 62.

Appellants note that the Examiner is improperly rejecting the claim in a piecemeal fashion. The Examiner asserts that the process of obtaining recycled calcium carbonate and the use of recycled calcium carbonate are unrelated. Specifically, the Examiner asserts that the use of recycled calcium carbonate in the treatment of paper only pertains to the use of recycled calcium

carbonate, “regardless of how the recycled calcium carbonate is formed.” Office Action at 4. This reading of claim 62 is incorrect.

Appellants’ claim recites a use of recycled calcium carbonate to treat paper, board, or nonwoven product, the recycled calcium carbonate being obtained by an explicitly claimed process. Thus, for a reference to anticipate the claim it must disclose two distinct limitations:

1) preparing recycled calcium carbonate by calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board or non-woven product; reacting the lime with water to form calcium hydroxide; and reacting the calcium hydroxide with carbon dioxide to form the recycled calcium carbonate; and

2) treating the paper, board, or nonwoven product with the recycled calcium carbonate obtained via the first limitation.

As discussed above, Sohara fails to disclose preparing recycled calcium carbonate by “calcining into lime.” Thus, the entire method recited in Appellants’ claim is not present in Sohara. Accordingly, independent claim 62 is deemed allowable, and the Board must order the withdrawal of the rejection of claim 62 under 35 U.S.C. §102(b) in view of Sohara.

2. Claim 62 is not anticipated under 35 U.S.C. §102 by W/O 98/16471 (“Virtanen”).

Claim 62 stands improperly rejected under 35 U.S.C. §102 as anticipated by W/O 98/16471 (“Virtanen”). Among the limitations of claim 62 not present in Virtanen are the explicitly recited steps of preparing recycled calcium carbonate and using recycled calcium carbonate in the treatment of paper, board, or nonwoven product. Specifically, Virtanen fails to disclose “recycled

calcium carbonate being prepared by calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board or non-woven product.”


The Examiner asserts “the formed recycled calcium carbonate also known as precipitated calcium carbonate (PCC) is used for treatment of paper.” Office Action at 4. Appellants disagree with this assertion. Precipitated calcium carbonate is not another name for recycled calcium carbonate. In fact, Virtanen is silent with respect to recycling. Virtanen’s PCC is manufactured from new starting materials, not via a recycling process. Thus, the benefit of using recycled calcium carbonate is not achieved.

Because Virtanen fails to disclose *inter alia* “recycled calcium carbonate being prepared by calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board or non-woven product” and “treating the paper, board, or nonwoven product with the recycled calcium carbonate”, claim 62 is not anticipated by Virtanen. Accordingly, independent claim 62 is deemed allowable, and the Board must order the withdrawal of the rejection of claim 62 under 35 U.S.C. §102(b) in view of Sohara.

VIII. CONCLUSION

For the foregoing reasons, it is respectfully submitted that Appellants' claims are not anticipated by either Sohara or Virtanen and, even if combined do not render the pending claims obvious, claim 62 is patentable over the art of record, and the Board must order the withdrawal of the Examiner's rejections.

Respectfully submitted,
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CLAIMS APPENDIX

1.-61. (canceled)

62. (previously presented) A use of recycled calcium carbonate in the treatment of a paper, board or nonwoven product, comprising:

treating the paper, board, or nonwoven product with the recycled calcium carbonate, the recycled calcium carbonate being prepared by calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board or non-woven product; reacting the lime with water to form calcium hydroxide; and reacting the calcium hydroxide with carbon dioxide to form the recycled calcium carbonate.

63. (withdrawn) A method of treating a paper, board or non-woven product using recycled calcium carbonate, comprising:

treating a paper, board, or nonwoven product with the recycled calcium carbonate, the recycled calcium carbonate being prepared by calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of the paper, board or non-woven product; reacting the lime with water to form calcium hydroxide; and reacting the calcium hydroxide with carbon dioxide to form the recycled calcium carbonate.

64. (withdrawn) A method of preparing recycled calcium carbonate, comprising:

calcining into lime precipitated calcium carbonate residue of a deinking process of recycled fiber of a paper, board or non-woven product;

reacting the lime with water to form calcium hydroxide; and

reacting the calcium hydroxide with carbon dioxide to form the recycled calcium carbonate.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None